Demographic development in post-war Greece: trends and bursts
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ABSTRACT

A) Total population

The population of Greece increased significantly during the post-war period (7,6 millions in 1951, 10,7 millions in 2017), while, at the same time it has aged significantly. The present paper provides a brief presentation of the changes in population size and age structure during the post-war period as well as:

- the evolution of the natural and the migration balance
- the evolution of the basic demographic components (fertility, mortality, nuptiality, migration)
- the demographic perspectives in the horizon 2050
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The main findings of our analysis can be summarized in the following:

Although the population growth in the post-war period was continuous, the causes were different through time. At the beginning, the big emigration waves of the 1950s and 1960s were less than the high natural increase of these years. Then, up to the end of the first decade of the 21st century the shrinkage of the natural balance of the period 1980-2000 was compensated by the positive net migration rates. However, during the last years (2011-2016) the population has decreased due to the fact that, for the first time in the post-war demographic history of the country, both the natural balance and the migration balance are negative.
Passing of time, the population of Greece has been marked by a transition from a young structure to a much older one. Greece, of course, is not an exception in the EU, even though in 2016 the percentage of population 65+ is one of the highest among the 28 countries, while, at the same time, Greece is the country with the highest dependency ratio (ratio of individuals aged 0-14 and 65+/100 individuals aged 15-64 years) among the other EU countries.

The inflow of foreigners during the 1990s up to the beginning of the current decade did not reverse the trends in population ageing (it just slowed it down). At the outset of the economic recession, which does not render Greece attractive as immigration destination anymore, given the low fertility levels and the increased average life expectancy at birth, it is expected that population ageing will continue with no immediate potential of slowing down. This phenomenon is obviously irreversible.

B) Mortality

Death probabilities by age and sex declined, as expected in all age groups during the period between 1951 and 2015. Yet, the total reduction of mortality conceals differences its rates of decrease through years, sex and age, while during the last decade mortality has not achieved the expected improvement. More specifically:

Deaths during the first year of life and infant mortality showed variations in the period 2008-2015, although they had shown a decrease up to 2007.At the ages 20-85, the decline of mortality rates up to the end of 2000 was stronger for women than for men. But, after the 2008, among men aged 20-35 years, these same rates are falling rapidly.

Up to 2015, there is no considerable evidence for an immediate negative impact of crisis on mortality by age. On the contrary, most studies reveal a decrease in the number of years in good health and increase in morbidity. This increase will most probably lead to a medium-term increase in the death probabilities of some ages or even in the decrease in life expectancy. Finally, we must emphasize that any increase in the expectancy of life (in conjunction with the decrease of the Fertility) accelerate (and will continue to accelerate) the aging of the population.

C) Fertility

Reproductive behaviour in Greece has been changing (just like in the other developed countries), and there is a dominant tendency towards a model of a family structure with a limited number of children. Period fertility declines smoothly (2,23 children/woman in 1980, 1,35 in the last five years) and the mean age of childbearing has been continuously increasing during the last decades (26,1 years in 1980/ > 31 years old in 2016). The attitudes and the mentality change progressively and young couples (women and men born after 1960) tend to adopt different behaviours different from those of their parents. These tendencies conform surely with the shrinkage and progressive disappearance of families with many children resulting in the rapid decline of, third, fourth, fifth and over, births.

More specifically, an analysis of cohort fertility enables us to ascertain that the generations of women born after 1960 have less and less children, while their age at childbearing becomes higher through time. . In addition, we must point out that recent economic crisis arose in a period characterized by a trend of continuous increase in women's age at childbearing; a trend that started thirty five years ago. The already older age of childbearing when the crisis occurred- and its ongoing increase – will undoubtedly affect any replacement from generations that "cross" the 2010 decade at their most reproductive ages (i.e women born after 1975), when the crisis is over. This fact will obviously have consequences on their cross-generational fertility i.e. the number of children they will give birth to.
The analysis of cohort fertility, at the same time, allows us to realize that in contrast to current beliefs: a) none of the generations born in Greece after 1935 and up to 1975 (generations for which we can calculate this indicator) has ensured its reproduction (which means that women of these generations has not been replaced by a daughter) and b) for generations born after 1960, fertility declines with accelerated tempo. .

The continuous tendency for first order fertility reduction (i.e. first births) in younger generations reflects *the emergence of a new phenomenon i.e. the increase of final childlessness* which will most probably lead to the fact that one out of four women born after the end of the decade of 70s will not have any child; a fact that enables us to formulate the hypothesis that the continuous increase of median age at first childbirth will most probably play a role in the increase of childlessness rates as the part of women of younger generations that decide to have their first child at a later age than the women of previous generations, will not be able to give birth to a child, even if they wish to, since their biological ability to conceive significantly and continuously decreases after the age of 35. Our analyses, show that less and less women of successive generations give birth to more than 3 children, while among women born after 1955, the percentage of them having two children declines (53,2% for 1955 generation, 43,4% for 1975 generation), .On the contrary, the number of women with only one child increases progressively (from 15,6 to 17,2% of women).

C) Migration flows

Greece, a traditional emigration country, since 1990 has been transformed into an immigration country which is also proven by the data of recent censuses: in 1981, foreigners were 180.000 which is less than 2% of total population (76% of which from the most developed countries,), while in 2011 foreigners were 912.000. Recent crisis, however, re-changed the direction of migration flows and the inflow and outflow balance shifts again to negative (-251.000 during 2011-2015 according to the Hellenic Statistical Authority), as the inflows just approach 300.000 while the outflows come to 550.000. Outflows are mainly of two groups: a) foreigners-economic migrants who had settled in Greece the previous two decades and returned to their countries because of the crisis and b) young (25-34 years old) or adults (35-50 years old) Greeks mostly tertiary education graduates, as well as Greeks which previous migration experiences.On the contrary, inflows are young foreigners (mainly economic refugees) and secondarily older age Greeks.

- **Recent economic crisis and migration**

During the period 2012-2017, mainly because of the unstable situation in a series of countries around the Mediterranean and its inland the inflows of foreigners to Greece are still taking place (yet with significant differentiations in relation to the years before 2011), and the deepening of the economic crisis together with the exceptionally high rates of unemployment have not impeded these flows. The big majority of the illegal incomers during the last five years come from the less developed countries first of Asia and then of Africa, as conflicts mainly in the Middle East area (and secondarily, in some African non- Mediterranean countries) have created new mass migration flows. At the same time, we must keep in mind that the large majority of the incomers after 2011 (refugees and/or economic migrants) do not intend to settle in Greece but to move to one of the more "alluring" countries of the EU.

Flows after 2011 are also different from the point of view of entrance gateways as almost the totality of the incomers during the last years arrive by boat crossing sea borders. During the period 2012-2017, according to the available data from national sources, 1,35 million persons (about 2/3 of which in 2015) entered the country illegally. The distribution of the incomers during the last years is also different from that of the past. More specifically, in the period 2006-2011, those coming from a European country (mostly Albania) were almost 50% of the illegal incomers to Greece (economic migrants in the majority), while, after 2011, the citizens of five countries (Syria, Afghanistan, Iraq, Pakistan, Iran) constitute the majority.

If almost the total of the arrivals in 2015 (as well as part of the illegal incomers in the preceding years) has managed to leave Greece mainly through the Balkan route until border closure, managing these massive inflows which are still taking place–even though of lower intensity in 2016 and 2017 – poses problems. Greek public administration lacks experience, coordination has been inadequate and availability of resources – as well as external assistance – has been limited. The situation has worsened critically since border closure resulting in the impossibility of about 55.000 illegal incomers to leave Greece.

D) The population of Greece in the horizon 2050

The reduction of the resident population during the next thirty five years is expected to be - regardless scenarios- constant, yet with differentiated per scenario /period decline rates. The six projection scenarios constructed in the framework of our study assigned to us by diaNeosis obviously lead to clearly differentiated results, both in terms of the number of the expected permanent resident population and of its distribution by sex and age. In particular, according to these scenarios, the total populations will be:

- at the end of the next twenty years (2035) from 10.41 to 9.51 MM over 10.86 MM in 2015, namely reductions from 0.44 up to 1.4 MM at absolute rates (4.1 -12 , 4%)

- At the end of the projective period (2050) ranging from 10.0 and 8.3 MM over 10.86

MM in 2015, i.e. reductions from 0.8 up to 2.5 MM at absolute rates (7.3 to 23.4% always in comparison with those of 2015).

However, apart from these differences in absolute terms, significant changes are expected and the age distribution. Thus, the average age (43,45 years 2015) is expected to rise in 2050 (+ 3,7/min - +5,5 years/ max, depending on the scenarios) and the median age -43,95 years in 2015- from 3.7 up to 5.7 years (and respectively, between 2015 and 2035, the average age from 3,6 up to 4,5 years and the median from 5.5 up to 7.1 years).

These differences per scenario obviously result from the differences that exist in the specific weight of old age groups (0-14/15-64/65+ years old). So,

- In 2035, the percentage of those > 65 and >85 years old of the total population (20,9 and 2,8% in 2015 respectively) is expected to range 27,9% -27,2% for the first group and 4,1%- 4,5% for the second one, while the % of the young ones (0-14 and 0-18 years old) 11,0% - 12,4% for the first group and 15,8% - 14,2% for the second one respectively.

- In 2050 the % of the > 65 and > 85 years old of the total population (20,9 and 2,8% in 2015) is expected to range 33,1% -30,3% for the first group and 6,5%-4,9% for the second one.

The faster increase of the very old (85+) than that of the 65+ in the future draws special attention. Their number, which is almost ten times more between 1951 and 2015, is expected anew to show a considerable increase during the next thirty five years (from +106 to +45% depending on the scenarios). Therefore, there will be considerable ageing not only of the total population but also of the >65 years old group. Thus, demographic ageing is not only intercepted but also its rhythm is expected to develop fast until 2050, while, at the same time, there will be acceleration of "ageing of the ageing".

Finally, we should note that a) expected changes in population structures (particularly until 2035) are largely determined by the size and structure of our population in the starting year (2015). More specifically, women who in the next two decades will at the peak of their reproductive age (25-40 years old) have already been born, and their number is precisely known. We also know, with relative precision, the number of persons who, during the same decades, will be at ages of high mortality (i.e. the number of persons who will be over 50) and, as a result, we are also able to estimate the expected number of deaths as more than 90% of deaths yearly come at these ages.

By extension, the capabilities of any intervention on population events in the short and long tem mainly focus on migration, as, for example, any significant changes in reproductive behaviours (see possible fertility increase) will minimally affect the size and age population distribution of our country in the next two decades. Therefore, those having the responsibility for the planning and decision-making should consider the probable aforementioned developments in the short-medium term as given, assess their impact, and take them into account in the planning and taking of any policy measures on the one hand, and, at the same time, if they regard that such developments are negative they must be concerned about taking measures which, if taken today, will "yield" much later.