

### *Economic recessions and fertility in the developed world: the Greek case*

Typically, fertility has a pro-cyclical relationship with economic growth. Recessions often lead to a temporary decline in period fertility levels some years later, partly reflecting a postponement of childbearing that is often later compensated during the period of improved economic conditions. A systematic review of past economic recessions occurred in developed countries confirms that social and economic crises often have serious effects on fertility while, beyond national differentiations, these effects have certain characteristics, e.g. a weak effect on generational fertility; an postponement on the timing of first birth (closely related to a late marriage or union) a close relationship between unemployment and age-specific fertility. The sensitivity of fertility behaviour to economic crises is less marked in countries with longstanding family policies and strong social security systems.

The recent recession in developed countries took place under different social conditions than previous recessions. The current crisis will last, most likely, longer than previous ones, more women than before are nowadays participating (and competing with men) in the labour market, most couples use reliable contraception that enables them to flexibly postpone their childbearing plans, the mean age at childbearing is extremely high (around 30 years), fertility rates are too low, and welfare systems are getting increasingly burdened by social security and health costs linked to the rapidly expanding number of elderly. All these factors can affect aggregate reproductive decisions, potentially aggravating the negative effects of the recession on fertility.

This work, using the latest available official data of Greece (the country that is most affected by the current recession in Europe) provides an investigation of the impact of the current economic crisis on fertility levels, as well as the evolution of these levels through time. Our investigation is based on analysis of the empirical data, provided by the Hellenic Statistical Authority (ELSTAT). Although we have long time series for our analysis, we should note that the period from the onset of the crisis and beyond is relatively short (five years only, 2010-2014). This fact does not facilitate the investigation of potential impacts of the crisis on fertility.

Using the empirical data as described above, simple and complex classical demographic indicators are calculated, as:

- Fertility rates by age of mother -period and cohort analysis-,
- Fertility rates by age of mother and order of birth (period and cohort analysis),
- Total annual fertility rate/TFR and Total completed fertility cohort rate  
Mean age of mothers of childbearing -for first births and for all births-.period and cohort analysis-,

Our analysis shows that the collapse of the Total Fertility Rate (TFR) in Greece during the 80s was mainly due to the change of the women's fertility calendar as all generation until 1975 will record a TFR > 1.7 children / woman (at least 4 decimal points higher than the lowest value of TFR noted in 1999). The growth of TFR in the 2000s is solely due to a compensation of the postponement of births in the previous two decades and absolutely not to an increase of the average number of children. The recent reversal of the upward trend of TFR coincides indeed with the emergence of the financial crisis; however it cannot be attributed solely to it.

At the same time, in Greece, the available evidence shows that the economic crisis affects mainly, due to unemployment, women under 35 years. The crisis coincided, however, with a previous trend of increasing the average age at childbearing, started in the mid-80s. This trend has resulted at 2014 to an extremely high average age at childbearing (more than 30 years of mother age for the first child). Therefore, any continued postponement of childbearing will inevitably lead to a decline of the younger cohort fertility and even if women of these generations aim to acquire one, two, or more children, a part of them will not succeed, since any replacement becomes problematic as child conception is a function of age and decrease rapidly after the age of 30.

We also point out that childbearing occurs within marriage (the percentage of non-marital births in Greece is the lowest in Europe). Simultaneously, the mean age at first marriage follows the last thirty years

an ascending course (from 23 years in the mid-1980s to 29.5 years in 2014). Based on the above, the mean age at first marriage and at first child birth are directly correlated. Therefore, in a country like Greece where childbearing occurs within marriage and the work of both individuals of a couple tended in recent decades to widespread to younger generations, it was important for most women of these generations to have a relatively stable work before their first marriage and their first child acquisition.

Given the very high unemployment rate in the age groups 20-35, for an important part of these population age groups, this fact does not valid resulting to the collapse of the first marriage rates in recent years. As a direct result, we observe a further increase both of the percentage of unmarried women in younger generations and of the average age at marriage. Both of them (the second in combination with the postponement of marital births see above) will inevitably lead to a further decline of total fertility rate of generations born after 1980-85.

In conclusion, according to the international bibliography, in countries with strong social policies and especially policies supporting family and childbearing the negative effects of the crisis are diminished. In Greece, at the beginning of the crisis, the welfare state was not particularly developed and, at the same time, it was extremely inefficient. In this context, family and childbearing aid measures were very limited, focused almost exclusively on the large families (>3 children) and in some cases these measures were inefficient (see for example retirement criteria for mothers with a minor child). The recent measures (those adapted in the first half of the current decade) were usually horizontal, while available policies resources shrank significantly while their rehabilitation is not expected in the near future. All these facts does not allow some optimism concerning the reversal of fertility decline of younger generations which, as expected, that they are going to spend a significant part of their reproductive life in crisis conditions.