

# FERTILITY IN ROMANIA: COMPARATIVE ANALYSIS FOR THE YEARS 1990 AND 2007

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**Keywords:** fertility, population decrease, demographic transition, family planning policy

**Abstract:** We performed a comparative analysis for the year 1990 (after changing the communist regime in 1989, when the Decree 770/1966 was repealed which prohibited the interruption of pregnancy by request) and 2007 (when the generation of women born in 1967 reached the age of 40, leaving the age groups with high fertility), using indicators derived from the historical analysis of the events. The analysis shows a deficit of 100 008 live births (31.84 %) in 2007 compared with 1990. This decrease is explained by changes in general fertility and the size of the quota of women of childbearing age. The comparison of 2007 to 1990 did not lead to any compensation of the demographic indicators due to the quota of fertile contingent, because until 2007 the quota of women of childbearing age diminished.

**Cuvinte cheie:** fertilitate, descreștere demografică, tranziție demografică, politici de planificare familială

**Rezumat:** Folosind indicatori derivați din analiza cronologică a evenimentelor este realizată o analiză comparativă pentru doi ani: 1990 (după schimbarea regimului comunist din decembrie 1989, când a fost abrogat Decretul 770/1966 pentru interzicerea întreruperii sarcinilor la cerere) și anul 2007 (când generația femeilor născute în 1967 împlinesc vârsta de 40 de ani, ieșind din grupele de vârstă cu fertilitate mare). Se evidențiază un deficit de 100 008 nașcuți vii (aproximativ 31,84%) în anul 2007, în comparație cu anul 1990. Scăderea se explică prin modificarea ratei generale de fertilitate și modificarea dimensiunii contingentului de femei de vârstă fertilă, de cea mai mare importanță fiind modificarea ratei generale de fertilitate în sensul diminuării sale. Comparația 2007 – 1990 nu mai duce o compensare a indicatorilor demografici datorită dimensiunii contingentului fertil, deoarece în 2007 contingentul de femei de vârstă fertilă a început să se diminueze în comparație cu dimensiunea aceluiași contingent înregistrată în anul 1990.

## INTRODUCTION

This article aims at conducting a comparative analysis of the phenomenon of fertility and demographic factors determining the changes of the phenomenon between the years 1990 and 2007. The reasons that led to the choice of the named years are related to the different context of demographic policies of the two years and structural changes of fertile contingent: in 1990, the year following the change of the communist regime in December 1989, after the repeal of Decree 770/1966, which prohibited the interruption of pregnancy per request and 2007, when the generation of women born in 1967 - the year following the adoption of Decree 770/1966 - reached the age of 40, preparing to leave the age groups with high fertility.(1,2) In this comparison we will highlight the changes between the two years regarding: the general fertility rate (GFR), modification of specific fertility by age model, changes in the structure and size of the quota consisting of fertile females.

## METHODS

This study uses a cross-cutting approach for the analysis of fertility for each of the two years compared. For comparison, we built a number of demographic indicators useful in identifying demographic factors that have led to changes in the number of live births in 2007 compared with 1990.(3,4)

## RESULTS

The indicators belong to two categories: absolute indicators, expressing the phenomenon of fertility changes and relative indicators showing how many times the size of the phenomenon changed between the years compared. Mentioned indicators are: the ratio of live births from the two years involved in the comparison, the general fertility rate ratio between the years compared, the difference between the number of live births in the years of comparison and the difference of live births in the case of applying specific and general fertility rates since 1990 compared to the number of female population of childbearing age in 2007 (1990 being the year of comparison, and 2007 the reference year), the ratio of hypothetical live births in 2007 (those born in 2007 plus the observed difference in live births that would have occurred if the 1990 fertility pattern had been maintained), the ratio between live births in 2007 and the hypothetical live births from 2007, the difference between the number of live births in 2007 and the number of hypothetical births in 2007.(5)

The ratio of live births in the reference years has a value of 68.16 %, showing a smaller number of live births in 2007 compared to 1990. The quantification  $100 \% - 68.16 \% = 31.84 \%$  shows the changes in the number of live births, this amount representing the actual deficit of births from 2007 to

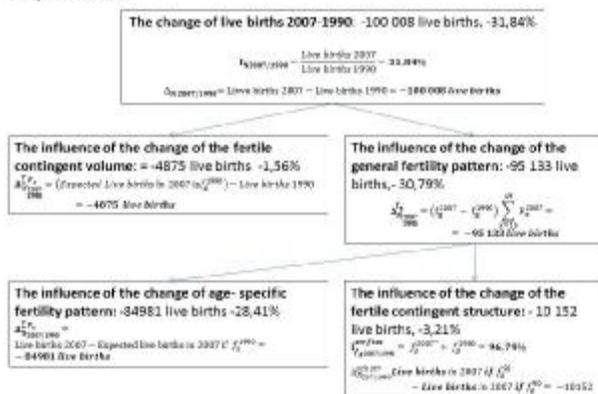
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1990. The absolute difference between live births in 2007 and live births in 1990 shows a deficit of 100 008. In other words, in 2007, there were born 100 008 fewer infants than in 1990. The general fertility rates ratio (GFR) from the compared years shows a deficit of about 30.79 % in 2007 compared to 1990. Assuming that in 2007 we would have maintained the GFR from 1990, the difference between the actual number of live births would show a deficit of 95 133 live births. The ratio of live births expected in 2007 if the GFR from 1990 was kept would be 98.44%, showing a deficit of 1.56% live births in 2007 compared to 1990. The intake difference between quotas of fertile years 2007-1990 shows that if the GFR from 1990 was kept, in 2007 a deficit of 4875 live births would be recorded, this deficit being based on the fertile quota. The ratio between real live births in 2007 and expected live births in the same year shows that if the GFR from 1990 was maintained, a deficit of 28,41% would be present. The difference between the number of actual births in 2007 and the expected number of live births in 2007 in the condition of maintaining specific fertility rates by age group highlights that if 1990's GFR was maintained we would have recorded more live births in 2007. If by 2007, we would have kept the specific fertility pattern from 1990, in 2007 we would have had an extra 84 981 live births compared to the actual number of registered births (observed) in 2007. In reality, the surplus was not recorded as the specific fertility pattern in 2007 was not the same as in 1999, specific fertility rates by age groups with high fertility in 2007 were actually lower. The difference between the GFR expected in 2007 under the condition of applying the pattern from 1990 and the real GFR from 1990 is -10152 live births, this difference suggesting the influence of the fertile quota which is constantly modified. If they would have kept the specific age fertility model from 1990 in 2007 we would observe a decreased overall fertility rate in 2007 by 3.21 %, due to the change in the fertile female contingent. The influence general fertility rate changes between 1990 and 2007, changes in the size of the fertile quota comparison between the two years, the change pattern by age specific fertility and changing age structure of childbearing quota are synthesized in figure no. 1.

Figure no. 1. Synthesis of influences that led to changes of the number of live births for 2007 compared to 1990

Fig. 1. The synthesis of influences that led to changes of the number of live births for 2007 compared to 1990



DISCUSSIONS

In our country the main indicators of the phenomenon of natality and fertility, and the number of live births showed a steady downward trend, even though the pro - natalist policies sustained by the communist regime influenced this tendency and masked it, causing periods of upward trends as they worked.(6) Among the main factors that led to the decline of fertility we observed: socioeconomic factors belonging to the

area, but closely related to contraceptive policies and social changes that induced modification in individual behaviour as a response to people passing by difficult economic times. Since the 2000s, the phenomenon of fertility downward tendency is accentuated by elements belonging to the second demographic transition: the time delay before forming a family and the average age increase at first birth (this also applies to latter births), decreasing family size and fertility history torque (changes in the level of education of those who founded a family, physical and mental health trajectories of family members etc.).(7) The consequences of fertility rates decline and decrease in the number of live births in a row can be grouped into several categories: the impossibility of maintaining / ensuring the sustainability of the nation, being unable to maintain the “welfare status” status characterized by a sustainable pension system and our well-being and comfort as individuals / citizens of the state which grants the opportunity to have the desired number of children. Therefore, policies of state intervention on the level of fertility may influence and modify these consequences. In addition, they can influence the equality between families with children and those without children, as well as fairness among children.(8)

CONCLUSIONS

The analysis of demographic trends in the period 1990-2007 shows the augmentation of the deficit of births from year to year, causing 2007 to record approximately 100 000 fewer births compared to 1990, in other words, a decline of 30 % in the number of live births. While maintaining the overall fertility rate from 1990, the number of live births in 2007 would have been of about 300 000 compared to about 200 000 which were actually registered. If the size of the female fertile contingent should have a positive influence on the demographic evolution of live births because of the many female generations born during the Communist period, in 2007 this influence records a downward trend, resulting in reducing the number of live births by approximately 5000 live births in 2007 compared to 1990. The demographic consequences can be understood and interpreted only after understanding the determinants of these developments, while acknowledging the factors is imperative when establishing demographic policies adequate to the population of our country.

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