

## GENERAL ASPECTS OF REGIONAL FERTILITY DIFFERENCES ON THE HAJDÚ-BIHAR – BIHOR EUROREGION BEFORE AND AFTER THE SYSTEM CHANGES

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**Abstract:** The temporal and spatial evolution of fertility is an essential feature in the demographic trends. The following analysis shows the territorial and fertility differences in Hajdú-Bihar-Bihor Euro region, compared to the national average and the values of the European Union. It is also topic of the present analysis to look at the differences of fertility level in the Euro region and whether growth or decline can be detected in the recent decades. We review the certain changes that appeared in the demographic characteristics of women giving birth and their impact on childbearing behavior. The main focus is on regional differences that occurred after the changes of the political system. For the temporal characterization of the trends we have chosen the year 1980 before the changes, the year 1990 that represents a transition, the turn of the millennium, 2000, and the recently completed year 2010.

**Keywords:** fertility, total fertility rate, change of regime, Bihor-Hajdú-Bihar Euro region, demographic characteristics of women giving birth, economic implications.

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### GEOGRAPHICAL LOCATION AND MAIN FEATURES

The cross-border cooperation in the mid-eighties is a central issue in the regional development policy of the European Union, which, from the 1990s onwards attracted more and more attention. Cooperative efforts between border areas from Hungary and Romania, following Romania's accession to the EU, continued to strengthen; an excellent example for this is the Hajdú-Bihar - Bihor Euroregion.

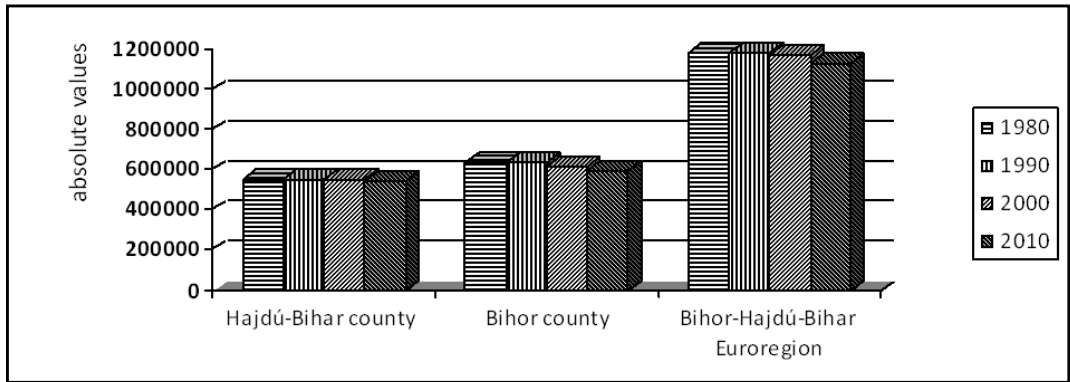
### GENERAL DEMOGRAPHIC CHARACTERISTICS

#### Population trends

Following the constant evolution of the total population in Hajdú-Bihar - Bihor Euro region in the past decades, we see that the period is divided in two sections. Before the change of regime the population follows a growing tendency while after the political and economic changes we can see a continuous population decrease, which is also evident in a separate analysis for the two counties that makes up the Euro region.

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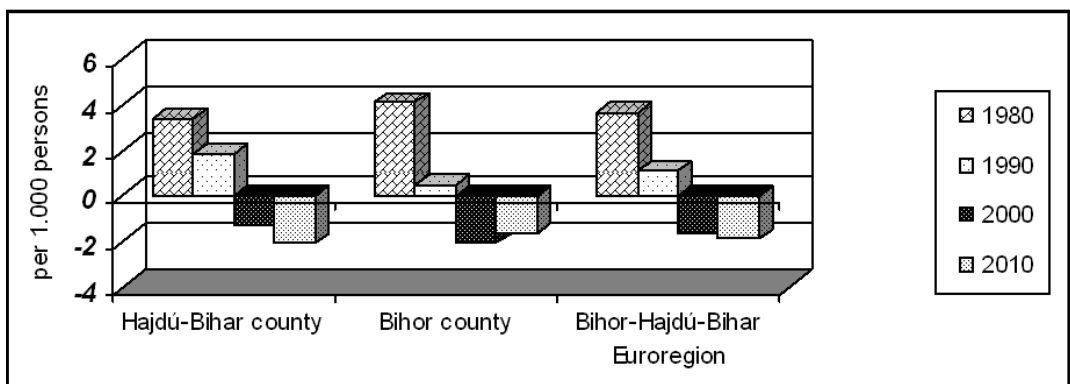


**Figure 1.** The euro region's total population of constant evolution in the period between 1980 and 2010  
Data source: INSSE, KSH

In the year 1980, when the euro region's development has not even been discussed, Hajdu-Bihar County had a population of 551 448 people while in Bihar County (82 146 people) 551 448 people were registered. On the Romanian side, the superiority of Bihar County in the last period is unbroken concerning the absolute values of the population, but this value dropped in 2010 when, as shown in figure 1, Hajdu-Bihar County had 541 298, where as Bihar County had 592 957 residents.

**Natural progeny of the Euro region before and after changes in the regime**

The natural increase in mortality and differences in the number of live births, which in most cases, calculated per 1000 persons. The natural population growth shows no entirely accurate picture of the change in population figures, because of the constantly changing migration data. Since the article focuses on the fertility rate in the euro region, in this context I briefly introduce the region's natural growth, before and after the regime change.



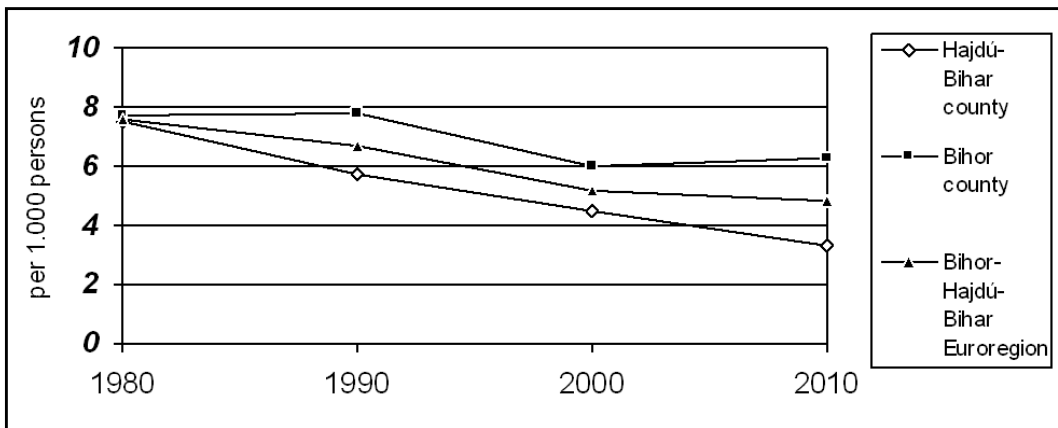
**Figure 2.** Changes in the natural growth in Hajdu-Bihar - Bihar Euroregion before and after the system change  
Data source: INSSE, KSH

The data are very talkative and, the unfortunately, dramatically illustrate the high degree of natural decrease in the number of the population, which already in the second half of the 1980s has started, but after the change dramatically accelerated in a negative standard, increasing the negative tendency of the number of population. While in 1980 the euro region's average was 3.7‰ while in 2010, -1.9‰ was observed (figure 2). We can conclude that the decrease was lower during the period for Hajdu-Bihar (5.5‰) than in Bihar County (5.8‰).

### The evolution of the number of marriages

There is no doubt a recent decrease in the number of people involved in long lasting relationships, while there are more and more so called visit-relationships, and also growing is the number of the young who choose to pursue a single lifestyle.

According to statistics, while in the 1960s, almost every woman married at least once and even in 1990, about three-quarters – according to today's long-term trend, assuming marriage patterns of women, nearly half will spend life as a single. It is no wonder that in recent years we are increasingly talking about a similar tendency in the two Euro regions, in the case of people in their thirties and forties lasting relationships are ignored or their preferences have changed. In today's modern life, material and financial well-being, and a hunger for what is called independent living occupies a central role. From our data also becomes apparent that, while before the system changes in 1980, in the Hajdú-Bihar-Bihar Euro region, there were on average 7.6 marriages per one thousand, three decades later this number was only 4.8. Also, if we compare the two major counties of the region we see a more evident decline in Hajdú-Bihar County from 7.49‰ to 3.31‰, and while in the neighboring county of Bihar from 7.74‰ to 6.3‰ (figure 3).



**Figure 3.** The evolution of the number and proportion of marriages between 1980 and 2010  
Data source: INSSE, KSH

According to statistics, young people, however in a very small percentage (5%) see independent living as the ideal way of life, and we can talk about only one-fifth of those who are not living in long-term relationships having consciously chosen this way of life (Kamaras, 2000).

The majority has chosen this life style unconsciously, due to career aspirations or not been able to develop a new relationship after the break with the former partner.

### The divorce rate

The notion of divorce in the demographic sense is considered to be the same as a final judicial resolution or annulment of marriage. The annual statistical summary of marriage and divorce data found over the past three decades show that the number of the divorces is higher than the number of marriages. The change of regime fundamentally changed family and social relations: changes on the functions of family from the previous norms and adopting new domestic ones lead to tensions and domestic conflict that in its turn weakened the family's internal unity and weakened the traditional position of family and marriage as well. The traditional peasant farming is declining; the gainful employment of women spread the tradition of suppressing odd-sized social mobility, rural housing abandonment, and the massive establishment in the cities. This leads to new possibilities using changes in the mass media, internet, social networking etc. and helps the establishment of contacts but the same time family and marriage become more open and vulnerable. The number of divorces

in the euro region, according to statistics, shows that per one thousand inhabitants in 1950 presents an average of 1.5 so far as Bihar and Hajdú-Bihar County are concerned. Our research shows differences in this average rate. In 1980 Hajdú-Bihar county presented an average of 2.4 divorces per 1 000 persons, the average of Bihar county was 1.2. This difference has increased by 2010 when Hajdú-Bihar County reached 2.7 while Bihar County saw a decline to 1.09. So both counties had a number of concerns on divorce rate. We can state that in the review period, at least for the past four decades, the divorce rate in Hajdú-Bihar County is double compared to Bihar County. In the west side of the euro region there is a growing tendency from 1990, but in contrast in Bihar County the opposite trend is shown. Here some explanation is required, since the euro region's two counties have very different values for the number and rate of divorces. Divorce rates are higher in many northern European countries, as well as in western European meaning that in those countries half of marriages end in divorce. Hungary is also such a country, so this could explain the „East-West” difference in our case. In contrast, the low divorce rates and the value from South-Eastern Europe were explained by the very strong social traditions established by the Catholic Church. Romania is somewhere in the middle as shown in the figures for Bihar County.

### The birth rate in the Hajdú-Bihar-Bihar Euroregion

The number of births is mostly affected by the family environment and institutionalization background even though there is a growing tendency in the statistical data that shows an increase in the number of births outside of marriage (Kamaras, 2000).

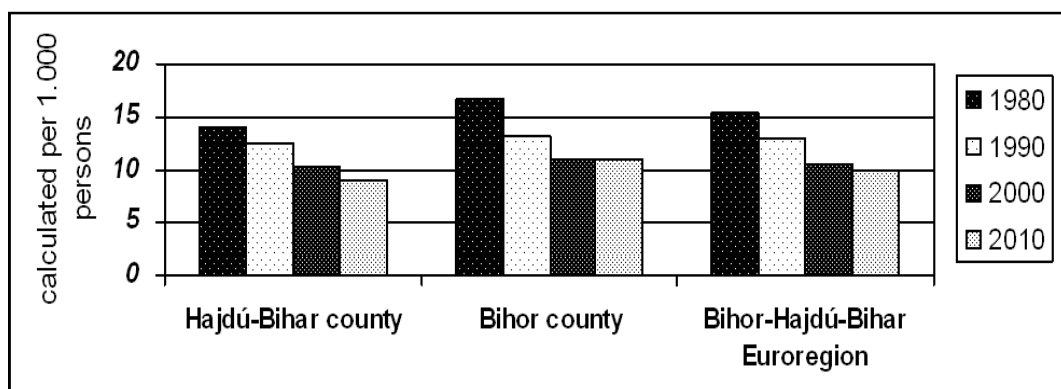


Figure 4. The birth rate in the Hajdú-Bihar - Bihar Euroregion

Data source: INSSE, KSH

In our region a steady decline in the number of marriages can be observed, along with neighboring countries. Although marriage was known for a long time to subside, alternative forms of union, especially the popularity of cohabitation can be seen, but this does not compensate for the loss of either marriage or the birth rate. All this is reflected in the Hajdú-Bihar - Bihar Euro region birth rate that from an average of 15.4 per thousand fell to 10 per thousand between 1980 and 2010, essentially to the same rate in both counties (figure 4).

### The fertility differences regarding the mother's age group

The overall level of fertility was significantly influenced by the rising or decreasing fertility age and these became a dominant influence. In the 1990s, the young people's infertility could not be balanced by the positive trend among the women who were over the age of 30. But after the turn of the millennium the process has been compensated, and the fluctuations in recent years interspersed with slow fertility increase, but only for women over 30, while at the same time the fertility of young people went on a downward trend.

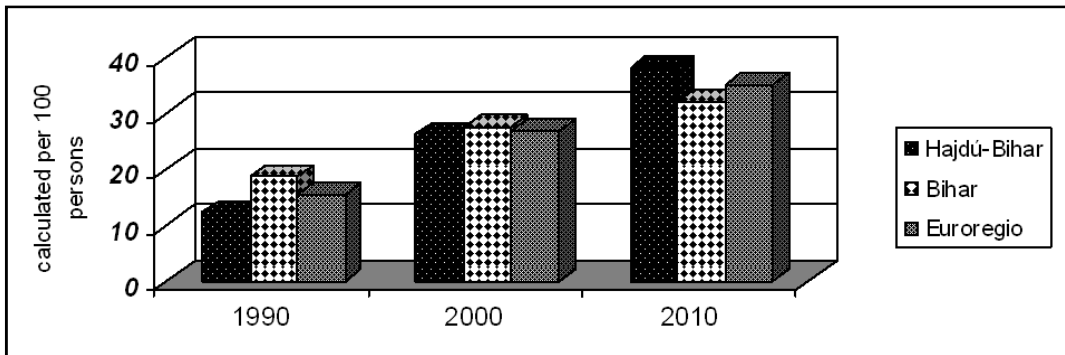
**Table 1.** Live birth rates on counties and mother age groups, total fertility rates between 1990, 2000 and 2010  
Data source: INSSE, KSH

County/Age group	Live birth rates on counties and mother age groups						
	15-19	20-24	25-29	30-34	35-39	40-49	Total fertility rate
Hajdú-Bihar County in 1990	43.7	168.8	121.9	49.3	17.1	1.2	2.0
Bihar County in 1990	44.6	142.3	104.1	46.4	21.4	5.1	1.8
Hajdú-Bihar – Bihar Euroregion middle value in 1990	44.1	155.5	113	47.8	19.2	3.1	1.9
Hajdú-Bihar County in 2000	27.4	87.4	107.0	57.4	21.7	2.4	1.53
Bihar County in 2000	38.2	98.5	83.6	40.4	15.6	4.0	1.4
Hajdú-Bihar–Bihar Euroregion middle value 2000	32.8	92.9	95.3	48.9	18.6	3.2	1.4
Hajdú-Bihar County in 2010	21.7	50.8	92.0	77.2	28.4	2.8	1.3
Bihar County in 2010	41.7	76.5	91	62.8	23.9	5.4	1.5
Hajdú-Bihar - Bihar Euroregion middle value in 2010	31.7	63.6	91.5	70	26.1	4.1	1.4

In the years following the regime change the fertility rapidly decreased. Over the past twenty years the total fertility rate in the investigated area decreased from 1.9 to 1.4 - per woman (table 1). This means that the number of children born in two decades is about 35 - 40% lower than the number of parents' generations.

### Non-marital births

The fertility of married women has long been more than double that of non-married people so the mother's marital status greatly affects the level of fertility. The period following the change of regime is characterized by a significantly higher proportion of births outside marriage.



**Figure 5.** The proportion of births outside marriage between 1990, 2000 and 2010 years  
Data source: INSSE, KSH

The change is due to a significant decline in the number of marriages in parallel with the increase in the proportion living in cohabitation among women at childbearing age. The vast majority of children born out of wedlock are living with unmarried women and more than two-thirds of them live in cohabitation. The proportion of children born out of wedlock is increasing in all European countries and is now 30% above average. The statistics show that most children born out of wedlock were in Estonia and Sweden (56 - 60%), but in Greece and Cyprus there are even today only a few percent of them (Kapitany & Speder, 2009).

In the euro region before the regime change there were only 15 births out of wedlock per one thousands people, while by 2010, there are already more than double values than in the previous period. If we examine the proportion of children born out of wedlock between 1990 and 2010 in the euro region counties a higher growth shows Hajdú-Bihar County with 25.6%, while Bihar is second with 13.3% (figure 5).

### **The average age of women giving birth**

While female fertility and birth rates stagnates below the level of simple reproduction, much has changed in the child-taking mothers and women of childbearing age in the demographic composition. The formerly prolific age groups, the 20-24 year old women, have given birth to more than two-thirds fewer children between 1990 and 2009. Their place was taken by women in the second half of their 20s and in their early 30s. The demographic consequences are the low level of fertility and birth rate. In the annual number of birth children of young mothers were missing. The postponement of childbearing increased the average age of women giving birth which between 1990 and 2000 raised with two years, and the subsequent 10 years saw an increased to 26 years, and in 2010 reached 27.1 years. The increase, however spatially minimally, deviated from the euro region's average. This is getting closer to the fact that the region's counties in population and aging will decline. In the child bearing delay key roles are occupied by the expansion of education, the transformation of relationships, the declining popularity of marriage, and the difficulties of independent start-ups. Although the values have changed the individual goals now rather overshadow other goals.

Returning to the total fertility rate, we can conclude that the population in the medium-term survival rates are forecast to be 2.1 - year value, only in this case, guards the population of premature deaths and provide non-spawning individuals replacement. Below values of 1.3 the rapid decline of the population is likely lead to a foreseeable future disappearance.

### **CONCLUSIONS AND PROPOSITIONS**

2010 statistics show that in the world Niger had the highest total fertility ratio (7.68), while the lowest value of fertility ratio was recorded in China's Macao (0.91).<sup>1</sup>

Compared to these, in the Hajdú-Bihar - Bihar Euro region the total fertility rate was 1.3, a value which can be a warning for the political leaders of the Euro region. In our region, but we can say that in almost the whole Europe for many years the constant decrease of population can be witnessed apart from demographic aging. Countries where immigrants are in a high number and these populations have major natural growth aspirations than the average show a lower level in these processes. In our Region at the beginning of the 1990s due to the political, economic and social changes, the massive strata of the population was shaken both financially and socially, and had lost its previous existence principles. A state-granted design for the future would be necessary which would lead to reduce fertility decline.

Today, we got so far from the simple reproduction level that it is unrealistic that in the near future the downward trend could be brought to a stop so it is only possible to maintain stagnation. For this it is highly necessary to elaborate an effective family policy to support child-raising. The incentive effects of a family policy to support a family having children are proved by domestic and international experience in this field. This involves a wide range of economic issues and it is potentially difficult to solve these problems. Issues that have to be dealt with are: pension funding, the increasing burden on health insurance, the middle-aged dramatically in greater expenditure, changing the structure of consumer society. In connection to immigrants new issues arise.

<sup>1</sup> [https://www.cia.gov/library/publications/the-worldfactbook/http://translate.google.ro/translate?hl=hu&langpair=en|hu&u=http://en.wikipedia.org/wiki/List\\_of\\_sovereign\\_states\\_and\\_dependent\\_territories\\_by\\_fertility\\_rate](https://www.cia.gov/library/publications/the-worldfactbook/http://translate.google.ro/translate?hl=hu&langpair=en|hu&u=http://en.wikipedia.org/wiki/List_of_sovereign_states_and_dependent_territories_by_fertility_rate)

To maintain the working age population and especially the working-retirement rate would require a significant influx of immigrants that may have positive results in individual regions, countries and the continent as a whole, but it is possible that it would only influence quantitative ratio distribution (Szakolczai, 2005).

However, it is conceivable that immigration can only slow the process of aging of the population, but could not bring it to a halt. It is necessary to be mentioned that on a very long-term scale migrants establish at the same time new habitats, ideologies, and cultural elements, these being added to the European social space diversity.

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