
Fertility of women in the Czech Republic by marital status and level of education in the period 1991–2011

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Abstract:

In the period 1991-2011 there were significant changes in marital status, educational level and fertility of women in the Czech Republic. Their age at marriage increased and more of them remained unmarried. At the same time, the proportion of women with higher education increased. Fertility fell, moved to a higher age, and the number of children born out of wedlock rose. This article presents an analysis of the fertility of women by age, marital status and educational attainment based on specific census data.

1. Introduction

After the year 1989, major political, but also economic and social changes took place in the Czech Republic and, as a consequence, changes in demographic behaviour. In addition to further reductions in mortality, significantly changes of marriage and reproductive behaviour of women occurred. As in the countries of Western, Northern and Southern Europe women in the Czech Republic began to put off having children until later life. Therefore, there was, particularly in the second half of the 1990s, a relatively sharp decline in fertility, especially of younger women, which began to be replaced from the beginning of this century by a gradual increase in fertility of women with advanced maternal age. However, total fertility rate of women is still below the level of 1990. (Kocourková, 2008).

At the same time, people deferred marriage to a higher age and reduced the marriage rate. Earlier pregnancy had been a relatively frequent reason for marrying so that the child would be born in wedlock, after 1990 there was a relatively fast-growing proportion of births of single women (e.g. Burcin et al., 2010).

The education level rose, with significantly increased proportion of women with higher education. This was one of the causes of women's fertility decline.

This article presents a comparison of the structure of women by age, marital status and highest education attained at the beginning of 1991 and 2001, as well as comparing fertility of women in the periods 1990–1991 and 2010–2011. These dates or periods were chosen in order to take advantage of the detailed data from the census.

2. Changes in the age structure of women of reproductive age and their structure by marital status

The census provides population data classified according to a series of attributes, including age, marital status and education. Special data provided by the Czech Statistical Office (CZSO) provided for sorting these three attributes simultaneously. Based on the year of birth, the age of women was recalculated as of 1 January 1991 and 1 January 2011. We only took into account 4 basic categories of women's marital status (single, married, divorced, widowed) and only 4 basic categories of education (elementary, college without maturity, college with maturity, higher). Thus we had a combination of 16 categories of marital status and education. In some categories the number of women is relatively low, so the analysis was performed with five-year age groups of women in reproductive age between 15 and 49 years.

In comparison with 1991, in 2011 there was a much larger proportion of unmarried women aged over 20 years. While in 1991 there was among the women aged 20-24 only slightly more than a third of single women aged over 20 years. Twenty years later, in the same age category, it was more than 90% and among those aged 30-34 more than a third were single.

Also, there was an increase of the proportion of divorced women, who in the past in the two highest categories of childbearing age numbered almost 25% in 2011.

Compared with 1991, women's educational levels were markedly higher in 2011. Almost every third woman aged 25–29 had completed higher education and more than half those aged 20–24 with maturity indicates that women's educational levels will rise. Since female graduates usually have children at a later age, this may be one of the causes to the current lower fertility (Rychtaříková, 2004). Several per cent of women in each age category did not mention their education.

Marital status of women may to some extent be related to educational attainment. For example, it is assumed that women with higher education may be more attractive to many men as future wives. On the other hand, some of these women find it perhaps more difficult to find a husband who would meet their expectations and assumptions. Then again, education may be for some women the reason for postponing marriage until after graduation.

In a number of age groups percentages of single women are the highest among women with higher education. The reasons for this may be postponement of marriage because of studies or higher demands when choosing a partner. In the higher age categories in 2011, there are the highest proportions among unmarried women with elementary education, which could indicate a lack of interest in these women to form long-lasting relationships, and, conversely, their being less attractive as wives. In that year we see in these age categories the highest proportion of married women among women with higher education. It is an age when most women have already completed their education and female university students as partners may be very attractive for some men.

Among women with higher education are also the lowest proportions of divorcees. The reason may be, *inter alia*, that they marry later than women with lower education. The proportion of widows is the lowest among undergraduates. It can be expected that they often have husbands with higher education, and hence with lower mortality.

3. Women's fertility by age, marital status and education in 1990–1991 and 2010–2011

For the analysis of fertility we singled out these periods to be able to use the census data as the mid-year population. There are naturally some inaccuracies since we use the number of people at the time of the census as the initial data of the census. The value of age, however, has been calculated according to the year of birth, so that only fault is therefore negligence of the influence of mortality (which is of course negligible for women in reproductive age) and migration in the period from the beginning of the year until the time of the census.

As live births we used special CSO data, classified not only by the mother's age but also by her marital status and education. Due to the very low fertility of women at the end of the reproductive period the graphs do not show the intervals of those aged 45–49.

In most age groups there is obviously the highest fertility rate of married women. This is evident particularly in the period 1990–1991, when more than 90% of children were born in wedlock, and hence fertility of married women greatly exceeds the fertility of women with other marital status. The highest fertility is in the youngest age groups. At an early age to enter into marriage rule, especially women, who wanted to have a child soon, or even a child already waiting.

While married women fertility decreases with age, unmarried fertility increases slightly; in 2011, fertility of women aged 35 years and more is higher than the fertility of married women. This may be so because, among other things, some women who look unsuccessfully for a husband eventually, due to their age, decide to become single mothers.

Differences in fertility of women by education are not as large as by marital status. In the age group 15-19 years women with the highest fertility have secondary education without maturity. Most of these are probably women, who decided after training decided not to pursue further study and to start a family. In the period 1990-1991 in the next age group we see relatively high fertility of women in the age group 20-24. The lower fertility of women with maturity is probably due to the fact that after finishing the secondary school some females continue their university studies and only have children after their completion (higher fertility in women with higher education in higher age groups).

In the 2010-2011 period there is evidently postponing of women's fertility (especially with higher education) to a higher age. Among those aged 20-24 only women with only primary education or college education have a significantly higher fertility rate.

Among unmarried women in the younger age groups women with primary education or secondary education without maturity have a significantly higher fertility rate. Also, among divorced women the highest fertility rate is that of women with primary education. Fertility of widowed women has a similar character but their number is very low, so the results have little informative value.

On the contrary, married women with higher education have a relatively high fertility rate. This could indicate that these women prefer to have children after entering into marriage.

4. Conclusion

The structure of women in reproductive age at the beginning of 1991 is very different from that at the beginning of 2011. The percentages of married women decreased as a result of the decrease in the marriage rate and postponement of marriages to a higher age in 2011, with a much higher percentage of single and divorced women, percentages of married women dropped.

Women's educational levels rose, however. In the younger age categories there were higher percentages of women with maturity or higher education in 2011 in comparison with 1991, and fewer women without maturity.

These facts affected the evolution of women's fertility. Fertility of single women in the period 2010-2011 was markedly higher than in the period twenty years ago. Fertility of elder women increased and fertility of younger women, especially those aged 15-19, declined.

The current tables have a limited informative value, however, because in the course of a reproduction period most women continue their education and their marital status changes. An important complement to the analysis of the influence of marital status and education on fertility of women would be cohort rates, which are provided to a limited extent by censuses (e.g. CSO, 2011, Fiala et al., 2015).

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