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FERTILITY OF POPULATION IN SLOVAKIA IN THE EUROPEAN CONTEXT

Jana Chovancová

Department of Human Geography and Demogeography, Faculty of Natural Sciences, Comenius University, Bratislava, Slovakia

Abstract: Slovakia has experienced considerable changes in rates of natality and fertility in the 90s. The article is objected on explanation and comprehension of the previously mentioned processes based on studies of long-term trends and specific features of their development in Slovakia. It also includes further comparison of mentioned development trends with some European states with examination of analogous features of their development in Slovakia and other European countries.

Key words: total fertility rate, age specific fertility rate

1. INTRODUCTION

While trends of natality and fertility decline have started in developed countries of the West and North Europe in the mid-60s, being followed then, though with certain delay, by the South-European countries, in the states of the former socialist block such development was slowed down by numerous prenatal precautions. That is why distinctive changes in demographic behaviour started to emerge there only after political and social changes that occurred in the early 90s. While in 1990-1997 live birth rate in the post-socialist countries in average decreased by 3-4‰ and total fertility rate by 0,5-0,7, in the West and North European countries it decreased by 0,5-1,5‰ and 0,1-0,2 respectively.

Relatively sharp decrease of natality and fertility rates has been observed in the recent years also in Slovakia. While the average annual decrease of live birth rate measured in 1950-1990 0,1‰ and in 1990-1997 it already reached 0,6‰, meanwhile live birth rate in 1990-1997 have declined from 15,0‰ to 11,0‰. If in 1950 the total

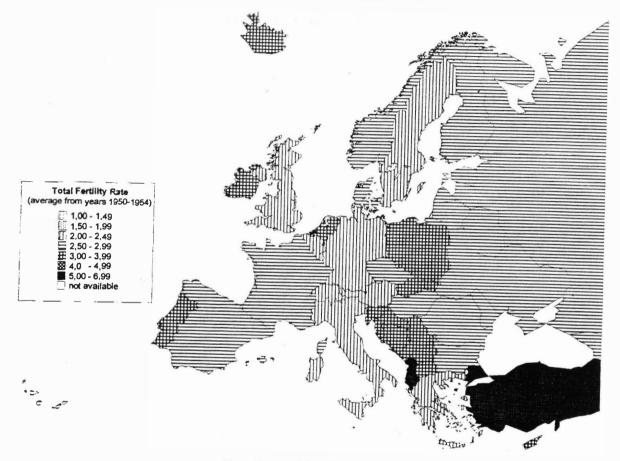
fertility rate measured 3,6, in 1990 it was only 2,1, having decreased till 1997 already to 1,43. More interesting is, that this sharp decrease incurred despite the fact that in the 90s several strong years of population born in the 70s have reached their reproductive age, moreover, the abortion rate have declined considerably. On the contrary, however, such general factors as changes in the people value orientation, rising individualism and growing women emancipation have reflected on decline of marriage rate caused by delays in marriages due to their postponing to the higher age. These general factors reflected changes of economic relations in Slovakia such as rising costs concerned with childcare, decline of the households real income, worsening social situation of young generation, financial inaccessibility of housing, risk of unemployment, new social policy in terms of family (i.e. reduction of loans at marriage, regulation of child benefits) etc. Moreover, proceeded secularisation of the society has encompassed weakening of traditional demographic behaviour. By contrast, though, some positive changes provide to declining of natality and fertility rates in Slovakia, for instance, young people with wider possibilities of self-realisation.

Development changes of natality and fertility rates, which are taking place in Slovakia, are not specific only for this country. Comparatively similar development of these processes can be monitored in other European countries and throughout the world. In this article, we analyse changes in fertility rates development in the second half of the 20th century in Slovakia, with emphasis on changes occurred in the last years. We compare single stages of fertility rates development in Slovakia with other European countries, defining basic differences between level and development of fertility rates.

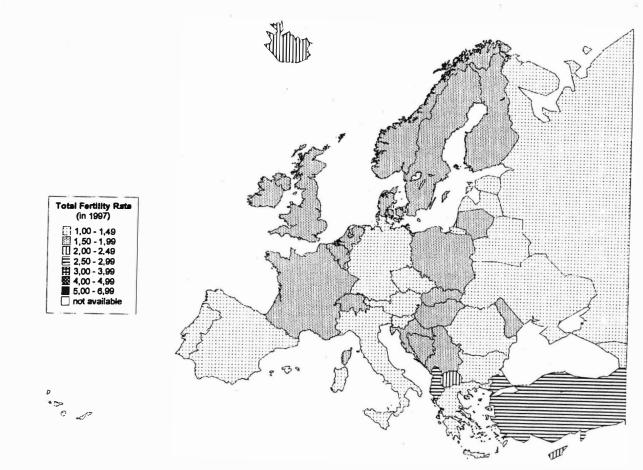
2. TOTAL FERTILITY RATE

Development of total fertility rate in Slovakia after the 2nd World War experienced relatively rapid decrease. If in 1950 it measured 3,6, it declined to 2,1 till 1990, having two maximums in the early 50s and mid-70s. Changes in demographic behaviour in the 90s actually provoked sharp decrease of fertility that has declined below the level of simple reproduction. Beyond this, matrimony and family are loosing their exclusive role, reflecting delays in marriage and postponing of childbearing, mainly of the second and the third one in the order. Number of illegitimate births is rising and one-child, maximum two-child family model is becoming more common on background of the family planning. The year 1992 could be regarded as crucial for Slovakia due to decline of total fertility rate below 2,0, which is a bound of prospective population decrease. Dramatic decline of this rate in the following years to 1,43 in 1997, has already confirmed and even intensified these trends.

Fertility in 1997, being analysed and compared then with some European states on the base of total fertility rate, have not reflected major variations. In majority countries the total fertility rate become below 2,0, what might lead to prospective population decrease (see Map 1). The lowest total fertility rate has San Marino (1,1), Spain (1,2),



Map 1 Total Fertility Rate in Europe



Italy (1,2), Latvia (1,2), Bulgaria (1,2) and Czech Republic (1,2). The maximum rate 2,8 refers to Albania and besides this, at least two live births per woman are reported for Island (2,1) and Macedonia (2,0). Very closely to the critical level (2,0) have approached total fertility rate in Ireland (1,9) and Norway (1,9).

In the early 50s variability of total fertility rate was considerably higher, magnitude between the highest fertility 5,60 (Albania) and the lowest 1,97 (Luxembourg) was even 3,63, but in 1997 it measured only 1,7. Except for Luxembourg, no country experienced decrease of the total fertility rate below 2,0 (see Map 2). Relatively low total fertility rate (2,0-2,5) have even had Belgium (2,34), Italy (2,32), Greece (2,29), Switzerland (2,28), Sweden (2,21), Germany (2,20), Great Britain (2,18) and Austria (2,09). Total fertility rate in Slovakia was 3,5 at that time, considerably exceeded the European average, which was 2,59. Relatively high fertility rate, except already mentioned Albania and Slovakia, have had Malta (4,17), Island (3,70), Cyprus (3,69), Poland (3,62) and former Yugoslavia (3,69) too.

The majority populations of the European countries have experienced declining trends of fertility rate in 90s. The only difference is, that decline of fertility in the West and North European countries (with exception of two isle countries - Ireland and Island and such former Soviet Union republics as Latvia, Lithuania, and Estonia) is falling down in slower pace, because they have already passed a period of more impressive decrease of fertility earlier. Over the last years, the sharp decrease of fertility occurred in the South and East European countries. But if we recall statistics from not so remote past, in 1980, for instance, majority of the South and East European countries reported more than 2,0 level of total fertility rate (Slovakia 2,32, Romania 2,45, Bulgaria 2,05, Czech Republic 2,07, Poland 2,28, Spain 2,21, Portugal 2,19, Greece 2,23, Albania 3,62, Slovenia 2,11, Macedonia 2,45), while in the West- and North-European countries it has already fallen below 2,0 (Austria 1,65, Switzerland 1,55, Belgium 1,69, Netherlands 1,60, Luxembourg 1,50, Finland 1,63, Sweden 1,68, Denmark 1,55, Norway 1,72 and Great Britain 1,89).

3. AGE SPECIFIC FERTILITY RATE

It is obvious, that decrease of total fertility rate in Slovakia after the 2nd World War is associated with decline of age specific fertility rate, what can be reported in all women age categories. Although, intensity of this decline are different in individual age categories. Generally, there is a strong dependence between intensity of fertility decline and women age. Till 1990, the highest decrease of fertility became current for the age categories of women older than 30. In 1990 these females age categories have indicated 2/3-4/5 decrease of age specific fertility rates comparing with 1950 figures. While in the early 50s almost 1/3 of live-born children was born in these age categories, in the late 80s it was only about 20%. 30-34 years old women have experienced the most considerable decline of fertility: if in 1950 their fertility measured 137‰ (almost tripled

figure comparing with 15-19 age category), in 1990 it has fallen to 46‰ (what is almost equal to 15-19 age category). Eventually, females of just this, the youngest fertility age category, indicated the lowest decrease of the age specific fertility rate.

Age specific fertility rates of two remaining age categories: 20-24 and 25-29 years old women - are also of great importance for evaluation of fertility. Till 1950, they were almost equal and curve of the age specific fertility rate indicated two peaks (principal and subsidiary maximums). The further development of fertility in Slovakia has experienced the highest fertility rate in 20-24 age category with only one maximum in the curve. It was concerned with high level of female employment, low mean ages at engagement, especially related to women while entering a marriage, and preferences of young spouses for sooner, rather than later terms of childbearing not only of the first, but even the next their children. Almost till 1980, the age specific fertility rate of 20-24 years old women were fluctuating above 200‰ and till 1990 they have decreased to 187‰. Similarly declined the age specific fertility of 25-29 years old women which was traditionally the second highest. Moreover, in 1990 this age category even strengthened its position indicating 117‰.

Sharp decrease of total fertility rate in Slovakia in 90s is very much concerned with decline of age specific fertility rate of women of all age categories, so the prior development trends have even deepened. The highest decline of fertility has been indicated in the most young age categories of women what actually means postponing of childbearing to the higher age. In 1997, they have experienced decrease of the age specific fertility rates by more than 1/4 comparing with 1990 figures. But even more impressive, i.e. by more than 40% comparing with 1990 appeared to be decrease of age specific fertility rate in 20-24 age category, i.e. from 187,1‰ to 106,2‰. Further significant decline of fertility was indicated in 15-19-age category: from 45,5‰ to 28,6‰, i.e. by more than 1/3. Women of higher fertile age (older than 30) have experienced the lowest decrease of the age specific fertility rate, what implies that they have already passed a sharp decrease of fertility in the past. Anyway, they almost always indicate eventually low fertility, what usually refer to bearing children of the higher order.

The highest fertility rates are always concerned with 20-24 years old women, though, 25-29 age category starts to create the second, subsidiary maximum. The difference in fertility rates between these two age categories is narrowing constantly. While in 1990 fertility rate in 20-24 years old women was 187,1‰ and in 25-29 years old ones - 116,6‰, what is less by 70,5‰, in 1997 it was 106,2‰ and 89,6‰, so the difference narrowed to 16,6‰. Even if the annual number of live births among females of two mentioned categories in observed period have decreased, their share of live births out of total annual amount is still about 70%, while share of 20-24 years old women since 1990 is about 41-43% and share of 25-29 years old women - about 26-29%. Therefore, age specific fertility distribution in 1997 in Slovakia has indicated some common features with fertility distribution in 1937-1950. A shift of the age of maximum fertility can be regarded as a positive development phenomenon.

While in 1997 figures of the total fertility rate indicate relatively small difference between European countries, the data concerned with the specific fertility rate by age shows much higher difference, both of fertility rates in the individual age categories and fertility distribution according by age.

Rates of the age specific fertility grouped by 5-year age intervals are at present on the relatively low level in almost all-European countries. In majority of states, maximum value of the age specific fertility rate fluctuates from 80% to 120%. Somewhat higher rates of maximum fertility (125-135%) are being monitored first of all in the North and West European countries, e.g. in Finland, Norway, Denmark, Island, Ireland, Netherlands, Belgium and France. Only in some South European countries (Albania, Macedonia, Malta) maximum rate of age specific fertility exceeds 145%. Eventually, there are clear differences in maximum age specific fertility rate between individual European countries, but it is may be useful to mention, that maximum fertility has not been reached by all countries in the same age category (see Graph 1).

Basically, it may be argued that maximum fertility in the East European countries is reached in lower age categories than in the West and North European countries. More complicated picture characterises the South European countries, which can not be featured so unambiguously. It is obvious, that distinguishing of the European countries according to geographical position can not correspond completely with countries distinguishing according to the age specific fertility. At present, in majority of the East European countries maximum specific fertility is being monitored in 20-24 women age category. Except Slovakia, a clear peak in the curve of specific fertility in mentioned age category has such countries as Romania, Bulgaria, Belarus, Moldova and Ukraine. Some other South European countries can be included to this group, such as Macedonia, Bosnia-Herzegovina, but also three North European countries: Latvia, Lithuania and Estonia.

In some countries of the East Europe (Czech Republic, Poland) and South Europe (Croatia, Yugoslavia), the second subsidiary maximum started to appear in the 25-29 age category. There can be defined two peaks in the curves of specific fertility, what implies that in fertility distribution they have already started approaching to the development of West and North European countries.

On the other hand, in majority of the West and North European countries, the curve of specific fertility reaches its maximum in the higher age of 25-29 years, e.g. in Austria, Germany, France, Belgium, Sweden, Norway, Finland, Denmark and Great Britain. Different maximum of the age specific fertility in 25-29 age category indicates also some South European countries, such as Greece, Portugal, Slovenia, etc. For some countries could be determined two peaks of specific fertility: the first one in 25-29 years and the second even in 30-34 years. These are Switzerland and Liechtenstein among the West European countries, and Spain and Italy among the South European countries. Even in Netherlands and Ireland maximum of specific fertility has shifted to 30-34 age category.

It is obvious, that in all countries age specific fertility indicates the lowest rates in the "edge" women age categories, but even here, we can see certain difference. Even if almost all countries experience less than one live born child per 1000 women in 45-49 age category, such homogeneity is not typical for 40-44 age category. While in the West

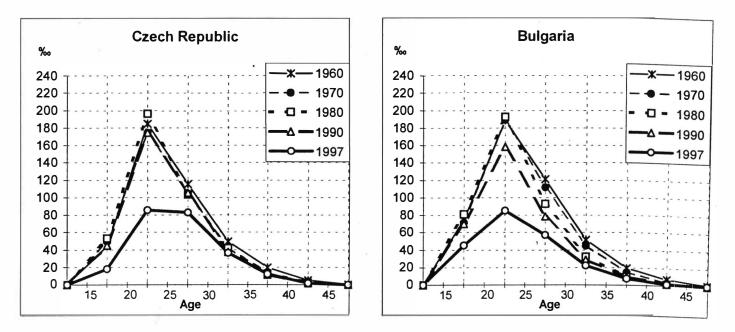


Fig. 1a Development of the Age Specific Fertility Rate in Selected European Countries

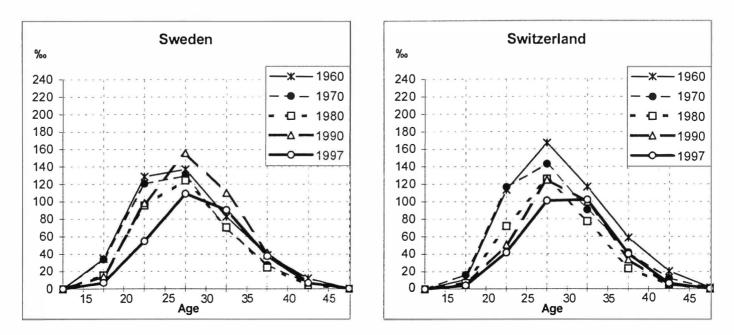


Fig. 1b Development of the Age Specific Fertility Rate in Selected European Countries

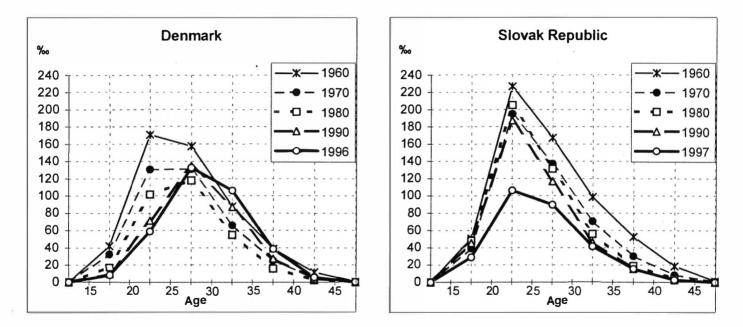


Fig. 1c Development of the Age Specific Fertility Rate in Selected European Countries

and North European countries (besides Lithuania, Latvia and Estonia) average number is 6-9 live born children per 1000 women in 40-44 age category, in majority of the East and South European countries, as well as in the aforesaid North European former republics of the USSR, it reports only 2-5 live born children. Somewhat lower age specific fertility in the first group of countries in 40-44 age category is reported, for instance Austria, Germany, Belgium (5‰) and on the contrary, a little bit higher fertility in the second group of countries is indicated in Italy, Croatia and Portugal (6‰).

More substantial country differences are in 15-19 women age category. In developed countries of the West and North Europe, natality and nuptiality rates have already shifted to higher age categories in previous years. Other countries experience this shift in present years, though some European countries still reported relatively high fertility of young women. Usually, in developed West and North European countries number does not exceed 20 of live born children per 1000 women aged 15-19 years, however in more ones of the European countries it become higher than 30, e.g. in Romania, Bulgaria, Macedonia, Moldova, Ukraine and Lithuania.

Monitoring the development of changes in distribution of specific fertility by age and changes of its level in individual European countries, reveal certain regularity, or similarity among single states. From 1960 until 1997, the specific fertility has already been declined in all age categories of all European countries. In 20-24 and 25-29 age categories that show the highest fertility, the rates of specific fertility till 1997 have fallen in almost all countries in average about 1/3 to 1/2 from their rates in 1960. Women of the higher fertile age (older than 40), whose fertility basically declines, have indicated the most impressive decrease of fertility, more than 2/3 rates by 1960. Considerable decrease of fertility has been experienced also aged 15-19 women, what is the evidence of postponing of childbearing to the later age. Moreover, in this age category the rates of specific fertility have declined by approximately 1/2 to 2/3 from their level in 1960 in almost all European countries (see Graph 1).

Besides development changes of fertility rates, which have occurred in some countries, further substantial changes have been reported in fertility distribution according to the women age, what is more convenient to monitor on changes in age of maximum fertility. From 1960 until 1997 in some countries, e.g. in Bulgaria, Romania, as well as in Slovakia, except changes in fertility rates, we can not actually define any essential changes in fertility distribution. Curves of specific fertility in these countries are clearly one-peaked, with maximum fertility rates in 20-24 years. Similar trends are specific for Hungary, Yugoslavia, Croatia and Czech Republic as well, but in these countries the subsidiary maximum started to create in the recent years in 25-29 age category, due to postponing of childbearing to the later age. Besides these countries, in 1960 the highest fertility in 20-24 age category was indicated by some other countries (e.g. Denmark, Island), but at the same time childbearing had started shifting to the later age, what had initially created two-peaked curve, and subsequently one-peaked curve, but though with maximum values in higher aged category 25-29. In 1960 distribution of age specific fertility has already become two-peaked in France, Sweden and Finland having indicated peaks in 20-24 and 25-29 years, but in 1997 maximum fertility has definitely shifted to the second mentioned age category. Even in sixties, some European

countries, e.g. Switzerland and Spain, had already indicated the highest fertility in 25-29 years, what created at present a model of two-peaked curve with peaks in 25-29 and 30-34 age categories.

Previously mentioned facts on specific fertility distribution by age, prompts some clues concerned with stages of development (over time) in this fertility distribution in European countries. One-peaked curve of specific fertility with maximum in 20-24 age category gradually transforms to two-peaked curve with subsidiary maximum in 25-29 years. The next stage, is concerned with fertility shift to the later age, becomes creation of a peak in the later age, i.e. 25-29 years. Similarly two-peaked curve in 25-29 and 30-34 years may shift and transform then to one-peaked curve in 30-34 age category. Based on the countries, which have already experienced such development over time, the same trend might have been expected in the other countries as well.

4. AVERAGE AGE OF WOMEN AT THE BIRTH OF CHILD

By contrast to early declared, some features of fertility are changing in Slovakia relatively slowly. Since 1970, average age of women at the birth of child, irrespective to sequence of childbirth, has not actually changed. In 1970, it was 25,6 years, and it was a little bit higher in 1997: 25,7 years. Among the European countries in 1997, the similar values of average age of women at the birth of child (less than 27 years) have indicated majority of the post-socialist countries, such as Romania (24,9), Lithuania (26,0), Latvia (26,1), Hungary (25,7), Estonia (26,2), Czech Republic (26,5), Bulgaria (24,5), Poland (26.9) and others. On the contrary, number of developed European countries indicated much higher value in 1997. In some countries is average age of women at the birth of child higher than 29 years, for instance in Finland (29,9), Norway (29,2), Ireland (30,1), Switzerland (29,6), Netherlands (30,4), Sweden (29,7), Luxembourg (29,8), etc. In contrast the first mentioned group, Slovakia included, where average age of women at the birth of child has not change since 70s, developed European countries have experienced quite substantial change of this pattern since 1970. In majority of them average age of women at the birth of child has increased at least by 2 years, in Norway by 2,2, Sweden by 2,7, Netherlands by 3,0, Luxembourg by 3,1 and in Finland even by 3.6 years (see Graph 2).

Similarly average age of women at the birth of first child in Slovakia is increasing very slowly, in 1970 it was 21,7 and in 1997 it was 23,1 years. Among the European countries a relatively low value of this pattern (by 24 years) in 1997 have indicated Romania (23,1), Poland (22,9), Lithuania (23,1), Latvia (23,5), Hungary (23,4), Estonia (23,4) and Bulgaria (22,8). On the contrary, in some countries average age of women at the birth of first child in 1997 is higher than 27 years, for instance in Finland (27,7), Luxembourg (28,5), Netherlands (29,0), Switzerland (28,3), Denmark (27,7 in 1996) and Germany (28,3 in 1996). Alike previously compared pattern of average age of women at the birth of child since 1970, development of average age of women at the

birth of first child indicates considerable difference among the European countries. In majority of post-socialist countries, this indicator has increased by less than 2 years, besides Slovakia in Bulgaria, Czech Republic, Hungary, Romania and Slovenia as well. Average age of women at the birth of first child has decreased, for instance in Poland and Estonia. On the contrary developed European countries since 1970 have experienced relatively impressive increase of this pattern, moreover in some of them at least by 3 years, in Norway (by 3,4), Finland (by 4,0), Switzerland (by 3,0), Netherlands (by 4,7), etc. (see Graph 2).

5. CONCLUSION

In the second half of the 20th century, changes in demographic behaviour are being reflected by decrease of natality and fertility rates, not only in Slovakia, but also in the other European countries. There is only difference in fastness and intensity of this decline. Decrease that is more impressive can be monitored in the last years in the post-socialist countries, what is related to the fact, that the West and North European countries have already reached the relatively low level earlier.

Besides declination of the total fertility rate, its variability has decreased in Europe as well. In the early fifties, no country, with exception of Luxembourg, had experienced total fertility rate below 2; magnitude between maximum (5,60) and minimum (1,97) fertility extended to 3,63. Meanwhile in 1997, total fertility rate in majority of countries have declined below 2, with magnitude decreasing to only 1,7 and maximum level of fertility was 2,8.

Decline of total fertility rate is concerned with declination of age specific fertility rate what may be monitored in extent of all age categories in all European countries. Intensity of this decline varies not only in different countries, but also in different women age categories. Until 1997 at least in all countries the age specific fertility rates in 20-24 and 25-29 age categories have decreased average about 1/3 to 1/2 from level in 1960. Women of the later fertile age (over 40 years) with generally low fertility level, indicate the most impressive decline of fertility, by more than 2/3 from values in 1960. Sharp decrease of fertility has been indicated by 15-19 years, what means the postpone of childbearing to the later age, moreover in majority of the European countries the age specific fertility rates have decreased approximately by 1/2 to 1/3 from values reached in 1960. Age specific fertility rates according to 5-year age intervals are relatively low at present in almost all-European countries. In majority of countries, maximum value of specific fertility fluctuates from 80% to 120%. A little bit higher values of maximum fertility are indicated first of all in the West and North European countries.

Besides development changes of level of specific fertility in individual countries, there have been occurred some significant changes in fertility distribution according to age, what can be seen best of all in changes of the maximum fertility age. In observed

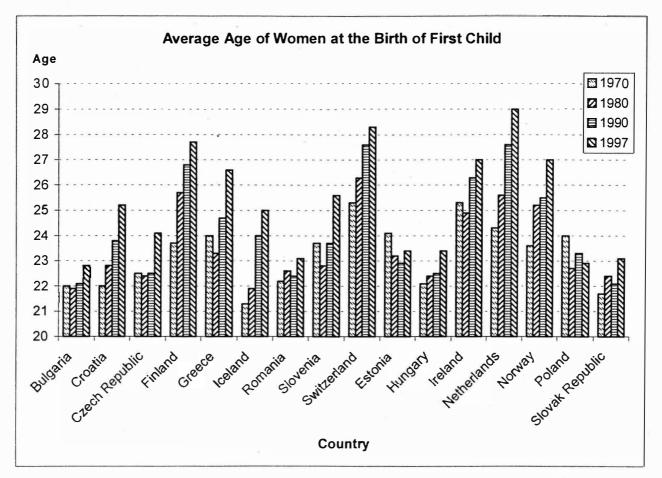


Fig. 2a Development of the Characteristics of Reproduction Behaviour in Selected European Countries

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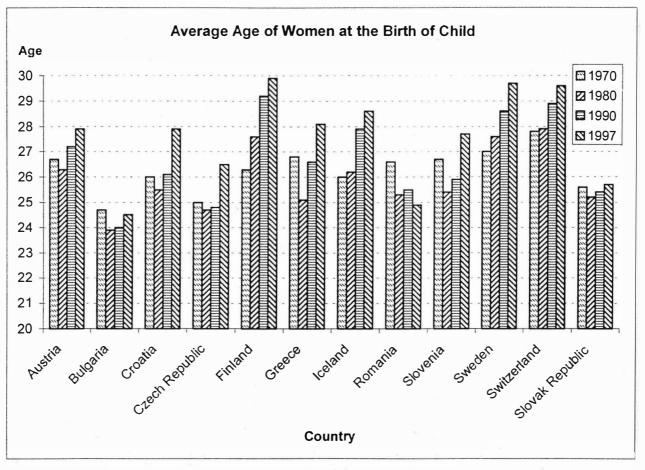


Fig. 2b Development of the Characteristics of Reproduction Behaviour in Selected European Countries

period of time maximum fertility age have shifted to the later age categories. At present, in majority of the East European countries, maximum value of the age specific fertility have been indicated in 20-24 age category. However, in majority of the West and North European countries the curve of specific fertility indicates clear maximum fertility in later age categories, 25-29 years or even 30-34 years.

In majority of the post-socialist countries such patterns of reproduction behaviour as average age of women at the birth of child, or average age of women at the birth of first child, are changing relatively slowly, meanwhile developed West or North European countries have experienced relatively expressive changes of this pattern. In 1997, in the first group of countries, average age of women at the birth of child almost never exceeded 27 years, and in terms of the first childbirth it was not more than 24 years, meanwhile in the second group of countries average age of women at the birth of child exceeded 29, and in terms of the first childbirth it was more than 27 years.

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Resume

Plodnosť obyvateľstva Slovenska v európskom kontexte

V druhej polovici 20. storočia dochádza k poklesu úrovne pôrodnosti a plodnosti, nielen na Slovensku ale aj v ostatných krajinách Európy, rozdiel je však v rýchlosti a intenzite tohto poklesu. Príspevok si kladie za cieľ analyzovať vývojové zmeny ukazovateľov plodnosti na Slovensku v tomto období s dôrazom na obdobie posledných rokov, porovnať v jednotlivých etapách vývoja úroveň plodnosti na Slovensku s jej úrovňou v ostatných štátoch Európy a určiť základné odlišnosti v úrovni a vo vývoji ukazovateľov plodnosti.

Zatiaľ čo od roku 1990 do roku 1997 priemerne poklesla hodnota hrubej miery živorodenosti v postsocialistických krajinách o 3-4% a úhrnnej plodnosti o 0,5-0,7, v krajinách západnej či severnej Európy to bolo o 0,5-1,5% a o 0,1-0,2. Okrem poklesu úhrnnej plodnosti dochádza aj k zníženiu variability hodnôt tohto ukazovateľa v Európe. Pokles úhrnnej plodnosti sa spája i s poklesom čistej špecifickej plodnosti žien a tento možno pozorovať vo všetkých vekových kategóriách vo všetkých štátoch Európy. Intenzita tohto poklesu okrem toho, že bola odlišná v jednotlivých štátoch, bola odlišná aj v jednotlivých vekových kategóriách žien.

Súčasne nastáva posun veku maximálnej plodnosti do vyšších kategórií. V súčasnosti vo väčšine štátov východnej Európy je maximum špecifickej plodnosti vo vekovej kategórii 20-24 rokov, no v štátoch západnej a severnej Európy má krivka špecifickej plodnosti výrazné maximum plodnosti vo vyššom veku 25-29 rokov, resp. 30-34 rokov.

Vyspelé krajiny západnej či severnej Európy zaznamenali aj pomerne výraznú zmenu priemerného veku ženy pri narodení dieťaťa, ktorý je vo väčšine z nich vyšší ako 29 rokov, resp. pri prvom dieťati je vyšší ako 27 rokov. Vo väčšine postsocialistických štátov sa tieto ukazovatele menia relatívne pomaly, v roku 1997 sledovaný priemerný vek spravidla nepresahuje 27 rokov a pri prvom dieťati 24 rokov.